

What is claimed is:

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1. A system for editing and displaying a structured argument, having a plurality of associated parameters, the system comprising:
  - a user interface that graphically displays the plurality of parameters at a user accessible display and receives input from a user defining the value of a selected parameter; and
  - a computational engine that alters the selected parameter to the defined value, updates the plurality of parameters according to the defined value of the selected parameter, and provides the altered parameters to the user interface, such that the display is updated in real time to reflect the user input.
2. The system of claim 1, the plurality of parameters comprising respective confidence values for a plurality of hypotheses.
3. The system of claim 2, at least one confidence value being displayed to a user via a first, qualitative indicator and a second, quantitative indicator.
4. The system of claim 2, the plurality of hypotheses being displayed as colored nodes within a belief network, and the respective confidence values being represented as at least one of the brightness, hue, and saturation of the color of the node.
5. The system of claim 4, the plurality of hypotheses comprising supporting, detracting, and neutral hypotheses, supporting hypotheses being associated with a first color, detracting hypotheses being associated with a second color, and neutral hypotheses being associated with a third color.
6. The system of claim 1, the plurality of parameters comprising a plurality of influence parameters, the influence parameters representing the degree of logical relatedness between respective associated first and second hypotheses.

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7. The system of claim 6, at least one influence parameter being displayed to a user via a first, qualitative indicator and a second, quantitative indicator.

8. The system of claim 6, the influence parameters being displayed as s connectors between respective first nodes, representing the associated first hypothesis, and respective second nodes, representing the associated second hypothesis, the magnitude of the influence parameter being represented by at least one spatial dimension of the connector.

9. The system of claim 1, further comprising a collapse node function that allows the structured argument to be scaled to a desired size.

10. The system of claim 1, being implemented as computer executable instructions on a computer readable medium.

11. The system of claim 1, further comprising a simulation function that alters at least one parameter of the structured argument according to a predetermined series of values, representing changes in the at least one parameter over a period of time.

12. The system of claim 1, the plurality of parameters defining an argument model.

13. The system of claim 12, the argument model representing a Bayesian belief network.

14. The system of claim 12, the argument model representing a Dempster-Shaffer belief network.

15. The system of claim 12, the argument model being represented as an Extensible Mark-up Language (XML) schema.

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16. A method for determining the sensitivity of a hypothesis of interest to a parameter within an argument model, comprising:

providing a continuous mechanism for a user to modify the parameter, such that the user can make multiple modifications to the parameter in rapid sequence;

updating a confidence value associated with the hypothesis of interest in response to the modification of the parameter; and

altering a display of the confidence value of the hypothesis of interest in real time to match the updated confidence value in response to each modification of the parameter.

17. The method of claim 16, the display of the confidence value comprising a qualitative display of the confidence value, such that a non-numerical quality of a node associated with the hypothesis of interest is altered to illustrate a change in the confidence value.

18. The method of claim 17, the non-numerical quality being the relative saturation of a color associated with the node.

19. The method of claim 17, the display of the confidence value further comprising a quantitative display.

20. The method of claim 16, the parameter comprising a confidence value associated with a contributing hypothesis within the structured argument.

21. The method of claim 20, the continuous mechanism comprising a line graph, spanning a minimum confidence value and a maximum confidence value, and a slider for selecting a value on the line graph.

22. The method of claim 16, the structured hypothesis comprising at least two contributing hypotheses, the parameter comprising an influence value associated with a logical relationship between the two contributing hypotheses.

23. The method of claim 22, the continuous mechanism comprising a line graph, spanning a minimum influence value and a maximum influence value, and a slider for selecting a value on the line graph.

24. A computer readable medium having computer executable instructions for performing the method of claim 16.

25. The method of claim 16, further comprising providing a predetermined series of values into the argument such that the at least one parameter is altered according to the predetermined series of values, the predetermined series of values representing changes in the at least one parameter over a period of time.

26. A system for editing and displaying a structured argument, comprising a plurality of parameters, comprising:

means for graphically displaying the plurality of parameters, each having an associated value;

means for receiving input from a user, the input comprising a request to modify respective values of at least one selected parameter from the plurality of parameters;

means for modifying the values of the at least one selected parameter and at least one other parameter from the plurality of parameters; and

means for updating the modified parameter values at the means for displaying in real time in response to the user input.

27. The system of claim 26, the means for displaying comprising means for qualitatively displaying the value of the plurality of parameters and means for quantitatively displaying the value of the plurality of parameters.

28. The system of claim 26, the means for displaying comprising means for scaling a displayed argument model to a desired size.

29. The system of claim 26, further comprising means for altering at least one parameter of the structured argument according to a predetermined series of values as to represent changes in the at least one parameter over a period of time.

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